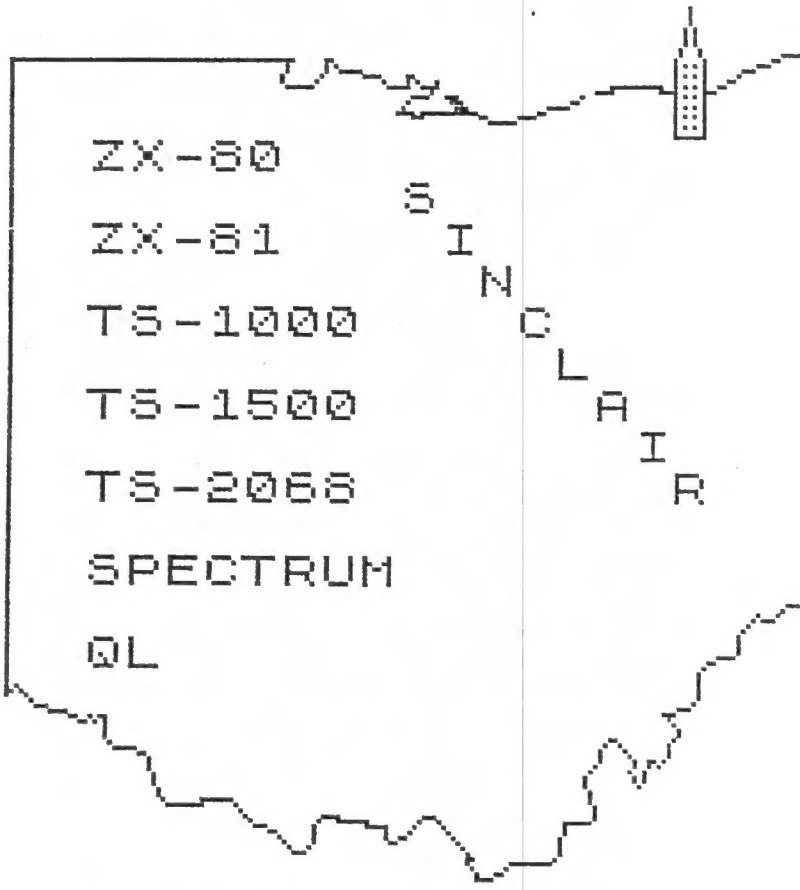
RAMTOP

AUGUST **198**

THE GREATER CLEVELAND SINCLAIR USERS GROUP WELCOMES ALL OHIOANS DEDICATED TO COMPUTER PROGRAMMING, LEARNING AND MODIFICATION !!!!



WEST SIDE GROUP MEETS AT GETHSEMANE LUTHERAN CHURCH
14560 MADISON AVE. LAKEWOOD, OHIO 7:30 P.M.
EVERY THIRD FRIDAY EACH MONTH (EXCEPT DECEMBER)
CONTACT: DICK SIEG (216) 433-4387

EAST SIDE GROUP MEETS AT THE EUCLID SQUARE MALL
IN THE EUCLIDIAN ROOM 7:30 P.M.
EVERY FIRST FRIDAY EACH MONTH
CONTACT: MAX SCHOENFELD (216) 371-1096

A short note to our friends from other newsletters and magazines. You are welcome to use any of our material, news, adds, or programs YOU: (1) Tell where it came from (RAMTOP Cleveland, Ohio) and (2) The author's name that wrote the article. We would appreciate it if you would send us a copy of the newsletter that it appeared in! Unless otherwise notified we will do the same.

THANK YOU FOR YOUR INTEREST IN OUR NEWSLETTER !

AUGUST 1985

SINCLAIR RESEARCH and SIR CLIVE

Sinclair Research has been purchased by Robert Maxwell, owner of the London Daily Mirror. Maxwell invested 15 million for 75% of the Company. Sir Clive retains 15% and will be a advisor in R & D. With the newspaper ties, maybe Sinclair will be treated more fairly by the media.

TIMEX verses TIMEX.

Rumers say that Timex USA objected to Timex Portugal's plans to market under the Timex logo in the US. How this will be resolved is unknown at this time.

Two venders, English Micro Connection and Zebra Systems have made arrangements to import the Portugal Disk Drives under their own logos. They both report that their initial orders, are already sold out, and that they expect to start shipping in mid August. As the Timex Portugal Plant will be closed in August for vacation, additional shipments may take a couple of months.

And speaking of vacations, the Zebra Systems BBS is off line for the month of August.

MORE VENDOR INFO.

Speedy Soft has sent out a new catalog.

The Aerco Disk Drive System is now available. TS Connection in Cincinnati has a system running, with good results. They will also sell you one.

The John Oliger/Ray Kingsley Disk system is still under development. Oliger is the one to contact if you like to build your own, from kits.

So far I haven't heard of any deliveries of US QL's.

A number of people have reported having problems with purchases from Rheeseware and Ramex.

****
T/S RESOURCES
****
news rumers gossip
---

by Andy Kosiorek

TIMEX REPAIRS.

At last thru the efforts of Ted Kynszek, we have the Timex Repair Service sitution cleared up. The Timex Little Rock facility is still doing factory repairs on all T/S computer products. Timex has a flat fee schedule for each item. Turn around time averages about six to eight weeks.

The TS Connection in Cincinnati has the facilities to also make repairs, subject to parts availability. TS Connection does not have any contractual affiliation with Timex Corp. In addition to repairs they also sell T/S products, new and used, and operate a Timex Sig on the Coconut BBS, 513-984-8705.

SOFTWARE

English Micro has started a software games club. Members receive a 15% discount on games ordered thru EMC.

SOFTAID - a new spectrum tape featuring ten games on sideone, and one the flip side the rock song "Do They Know It's Christmas. Produced by Quicksilva, proceeds go to aid starving Ethiopians.

EMC reports that the three most popular selling games in the U.K. are: Raid Over Moscow, Gremlins-The Adventure, and Backpackers Guide to the Universe, Vol 1.

LITERATURE

The August issue of the L.I.S.T. newsletter published an excellant research paper by Cedric Bastiaans "On Tape Loading, Waveforms and Levels, for T/S Computers." Several club members have copies.

A new book with a interesting title; "Translating Programs into T/S Basic" 190 pages, $8.00. Available from K.D.V.H.E. Publishers, PO Box 6788, Chicago, Ill. 60680.

Feb. 29, 1984

S C R O L L E R

Below are 3 programs for the ZX 81, TS 1000 or TS 1500 that utilize the "Scroll" effect. These can be used either as a Demo program to impress your friends or could be incorporated into one of your programs.

Program 1: takes a 32 character message and scrolls downward at a rate determined by the amount of delay in address 16550.

Program 2: takes a 32 Character message and scrolls left at a rate determined by the amount of delay in address 16582.

Program 3: takes a 64 character message and scrolls left at a rate determined by the amount of delay in Address 16646.

For Program 1...

Step 1A. Type in 91 (X's) as follows...
5 REM XXX ----> 91 (X's)

Step 1B. Type in Listing 1.

Step 1C. Run - 1000 and Poke in from left to right, top to bottom...
1, 0, 20, 11, 120, 177, 32, 251, 201, 42, 12, 64, 35, 6, 22, 34, 162, 64, 197, 1, 32, 0, 84, 93, 33, 130, 64, 237, 176, 205, 164, 64, 42, 162, 64, 6, 32, 54, 0, 35, 16, 251, 205, 164, 64, 42, 162, 64, 17, 33, 0, 25, 193, 5, 32, 215, 201

Step 1D. Delete Listing 1 by typing in the line number, then "Enter".
Dont use "New" or you will wipe out everything.

Step 1E. Type in Listing 2.

For Program 2...

Step 2A. Type in 155 (X's) as follows...
5 REM XXX ----> 155 (X's)

Step 2B. Type in Listing 1 and then change Line 1000 to:
FOR F=16580 TO 16668

Step 2C. Run - 1000 and Poke in from left to right, top to bottom...
1, 0, 20, 11, 120, 177, 32, 251, 201, 33, 130, 64, 17, 162, 64, 1, 32, 0, 237, 176, 42, 12, 64, 17, 75, 1, 25, 34, 194, 64, 84, 93, 33, 162, 64, 1, 32, 0, 237, 176, 205, 196, 64, 33, 162, 64, 70, 120, 50, 193, 64, 35, 1, 31, 0, 237, 91, 194, 64, 237, 176, 205, 196, 64, 1, 32, 0, 42, 194, 64, 17, 162, 64, 237, 176, 42, 37, 64, 124, 254, 253, 32, 213, 125, 254, 223, 32, 208, 201

Step 2D. Delete Listing 1 by typing in the line number, then "Enter".
Dont use "New" or you will wipe out everything.

Step 2E. Type in Listing 2.

Step 2F. Change Line 70: Listing 2; to:
70 RAND USR 16589

For Program 3...

Step 3A. Type in 274 (X's) as follows...
5 REM XXX ----> 274 (X's)

Step 3B. Type in Listing 1 and then change line 1000 to:
1000 FOR F=16644 TO 16787

Step 3C. Run - 1000 and Poke in from left to right, top to bottom...

1, 0, 20, 11, 120, 177, 32, 251, 201, 33, 130, 64, 17, 194, 64, 1, 64, 0, 237, 176, 42, 12, 64, 17, 75, 1, 25, 34, 2, 65, 84, 93, 33, 194, 64, 1, 32, 0, 237, 176, 205, 4, 65, 33, 194, 64, 70, 120, 50, 1, 65, 35, 1, 32, 0, 237, 91, 2, 65, 237, 176, 205, 4, 65, 43, 84, 93, 1, 31, 0, 35, 237, 176, 1, 32, 0, 42, 2, 65, 17, 194, 64, 237, 176, 42, 37, 64, 17, 253, 251, 229, 175, 237, 82, 32, 14, 58, 6, 65, 60, 254, 50, 48, 6, 225, 50, 6, 65, 24, 186, 225, 17, 253, 239, 229, 175, 237, 82, 32, 14, 58, 6, 65, 61, 254, 1, 56, 6, 225, 50, 6, 65, 24, 162, 225, 17, 223, 253, 175, 237, 82, 32, 153, 201

Step 3D. Delete Listing 1 by typing in the line number, then "Enter".
Dont use "New" or you will wipe out everything.

Step 3E. Type in Listing 2.

Step 3F. Change Line 40; Listing 2; to: 40 FOR F=1 TO 64
and
Change Line 70 to: 70 RAND USR 16653

Listing 1

```
1000  FOR F=16548 TO 16604
1010  INPUT I
1020  POKE F, I
1030  SCROLL
1040  PRINT F; TAB 6; PEEK F
1050  NEXT F
```

Listing 2

```
10  PRINT AT 21, 0;"ENTER
    MESSAGE?"
20  INPUT A$
30  CLS
40  FOR F=1 TO 32
50  POKE (16513+F), VAL STR$
    (CODE A$(F))
60  NEXT F
70  RAND USR 16557
80  STOP
```

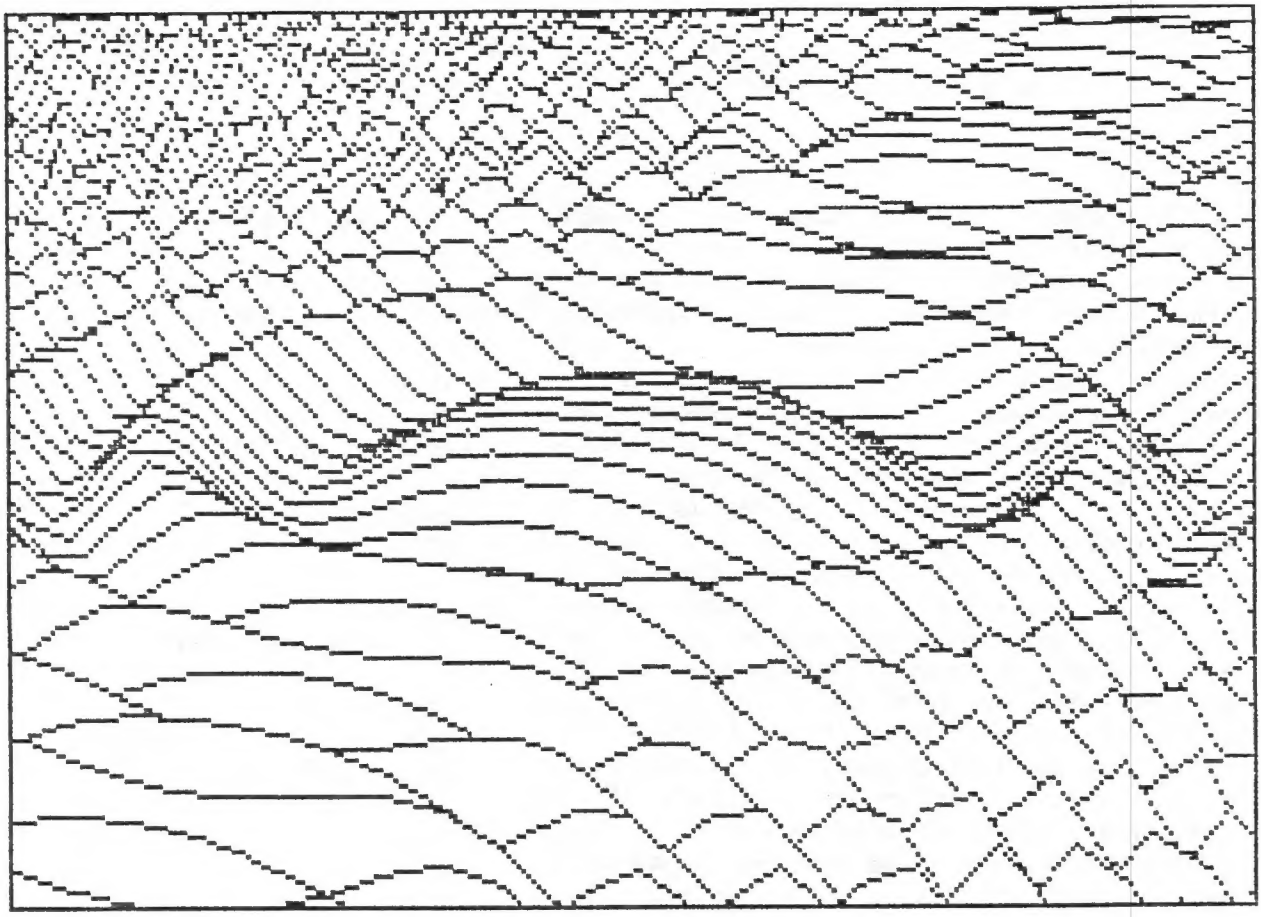
NOTES:

1. When you enter any message, fill up any remaining gaps with "spaces".
   i.e. "MY NAME IS BOB ↓ "
   (14 | remaining)

   Program 2: enter 18 spaces
   Program 3: enter 50 spaces

2. For Program 3, to make the display run slower, press "S".
3. For Program 3, to make the display run faster, press "F".
4. To stop the programs, simply press "P".
5. If you desire a breakdown of the Machine-Code routines, send me a "SASE" and I will send the information as soon as possible. 1-HAND 1 DOLLAR

Thanks Theo! Next month we will have another fine program for the 1000/1500. It will be "METRIC CONVERTER".



COSINE SURFACE By T.A.Knyszek

Converted from APPLE II to TS-2068

```
 5 REM COSINE-SURFACE---------
10 LET CX=128: LET CY=88
20 LET RHO=80: LET D=750
30 LET THETA=.4: LET S1= SIN (THETA): LET C1= COS (THETA)
40 LET PHI=1.25: LET S2= SIN (PHI): LET C2= COS (PHI)
50 DEF FN Z(X)= COS (.06*((X*X)+(Y*Y)))
60 DIM K(281): DIM T(281)
70 FOR I=1 TO 280: LET K(I)=191: NEXT I
80 REM POINT GENERATING LOOP--
90 FOR X=22 TO -55 STEP -1
100 LET FL=0
110 FOR Y=-40 TO 19
120 LET Z= FN Z(X)
130 GO SUB 190
140 NEXT Y: NEXT X
150 REM COLOR------------------
160 PLOT 0,0: DRAW 0,175: DRAW 255,0: DRAW 0,-175: DRAW -255,0
170 STOP
180 REM PLOTTING SUBROUTINE----
190 LET XE=-X*S1+Y*C1
200 LET YE=-X*C1*C2-Y*S1*C2+Z*S2
210 LET ZE=-X*S2*C1-Y*S2*S1-Z*C2+RHO
220 LET SX=D*(XE/ZE)+CX
230 LET SY=D*(YE/ZE)+CY
240) IF FL=0 THEN  LET FL=1: LET F=0: GO TO 360
250 LET DX=OX-SX: IF DX=0 THEN  LET DX=1
260 LET SL=(OY-SY)/DX: LET YP=OY
270 FOR P= INT (OX)+1 TO SX
280 LET FG=1
290 LET YP=YP+SL
300 IF P<0 OR P>255 THEN  LET FG=0: LET F=0: GO TO 350
310 IF YP>175 OR YP<0 THEN  LET FG=0: LET F=0
320 IF YP <= K(P+1) THEN  GO TO 370
330 IF YP >= T(P+1) THEN  GO TO 420
340 LET F=0
350 NEXT P
360 LET OX=SX: LET OY=SY: RETURN
370 LET K(P+1)=YP
380 IF FG=0 THEN  GO TO 410
390 IF F=0 THEN  PLOT P,YP: LET F=1
400 PLOT P,YP
410 IF YP<T(P+1) THEN  GO TO 350
420 LET T(P+1)=YP
430 IF FG=0 THEN  GO TO 460
440 IF F=0 THEN  PLOT P,YP: LET F=1
450 PLOT P,YP
460 GO TO 350
```

Thanks Jed! This is a real beauty! I know that may will love it!

FLASH! I got a call from Tom and he says that there is going to be a computer and electronics show in Akron at Quaker Square! We will be there to try to prove that T/S users still exist! Why not come down and join us? It is to be on Aug. 24 & 25. Call Tom or me for details! TOM- 928-7910, Me- 661-4105

THE OLIVETTI PR2300 PRINTER

The Olivetti printer is an ink jet printer that is available from DAK in California as a close out, I first saw this printer at a trade show in Chicago several years ago. The quality and relative quietness of the machine impressed me. The printer uses a 7X7dot matrix and prints bi-directionally at a rate of about 110 characters per second or a little over a line a second. The ink comes in a glass ampule through which an electric spark carries the ink to the paper. If you turn out the lights you can watch the spark race across the paper and it may remind you of the old ZX printer. When you have finished printing you will notice a trace of ozone in the air. The printer has the capability of using bit mapped graphics and can produce a horizontal resolution of 110 dots per inch horizontally and a vertical resolution of 216 dots per inch. On the negative side the character set is an unusual one and may not be as robust as some might prefer. Italics are not supported in the firmware and since it is not an impact printer carbons are out of the question. I had to return my first printer because of an intermittent problem in the circuitry. A telephone call to Docutel/Olivetti's office in Texas produced results that were similar as if I had not called. DAK replaced the unit and as a precaution I ordered the service manual for the printer. The manual seems to provided everything a good manual should and may preclude using the Texas repair department except for ordering an occasional part. Overall I believe this printer to be an excellent value for $298.

THE AERCO CENTRONICS INTERFACE

After having purchased a large printer I had to decide upon the printer interface. I purchased the Aerco because the printer driver software supported my printer (Olivetti) and because they were supporting their interface. The Tasword II pokes were already known to me and Aerco has available the pokes to use with the Spectrum version of this program. After ordering I recieved the interface within a week. The interface is a bare board with the cable covering the face of the board. The board itself seemed to be well made and the components had not been tampered with like having their numbers scraped off so that future replacement would not be impossible. The documentation of the program came with a logic diagram with the pinouts marked. I requested software to run with Spectrum programs and recieved two driver programs. The first works only with the 2068, and the second works with both the 2068 and Spectrum and is relocatable in memory. I have used the former more frequently than the latter as I have not resolved a glitch with screen dumps in the relocatable version. The price of $69. is not cheap but the software and the support available seem worth it.

Thomas Simon Thanks, Tom! This is from Tom's printer.

I found this in my folder but there was no name on it. If you wrote it, let me know you deserve to be recognized!

There is a computer magazine called Computer Smyth. It is new. They review micro assembly kits and feature do it yourself projects. It is published quarterly for $15 a year. The address is PO BOX 176, Petterborough, NY, 03458.

Rheesware has several periferals that may be of interest such as serial or Centronics interface that plugs into the 2068's joystick port and a Koala Pad interface and Analog pointer adapter which will support the Radio Shack mouse and joysticks. Write to them at: 1660 S Duneville Rd., Las Vegas, NV. 89102.

Try this for the 2068. This address is used to select the permanent colors for the screen.

It could be useful in your programing. Line 50 sets the screen for white paper and black ink. If this is a 7 you will have the oposite. Anything over 127 will be flashing. If you look more closely you will see that the first 2 lines are with the BRIGHT off. Then the next 2 it is on. The 3rd and 4th are flashing, but the 3rd has the BRIGHT off, and the 4th has it on.

What this boils down to is we can change the the current colors that are being printed to the screen. The address: 23693, is like any other byte, that is, 8 bits. The bits are used as follows.

```
10 FOR n=0 TO 255
20 POKE 23693,n
30 PRINT "*";
40 NEXT n
50 POKE 23693,120
```

BITS from most significant to least significant:

8th: (128) To determine if FLASH is on(1) or off(0).
7th: (64) To determine if BRIGHT is on(1) or off(0).
6th, 5th, & 4th: (32, 16, 8) Is for the PAPER color.
3rd, 2cd, & 1st: (4, 2, 1) Is for the INK color.

To make this easier you just have to remember to:
Multiply the FLASH (1 or 0) by 128.
Multiply the BRIGHT (1 or 0) by 64.
Multiply the PAPER (0 - 7) by 8.
Now add these values and add to it the INK (0 - 7).

For example: If you want PAPER to be green, and INK to be blue, then you would POKE 23693,33.
INK= 1(blue) PAPER=32(green=4*8)
BRIGHT=0(64*0) FLASH=0(128*0).
Thus: 0+0+32+1=33. Easy? Well, not at first but it could make it posible to change your colors easily in one fairly short routine. Try this:

```
10 REM I=INK
20 REM P=PAPER
30 REM F=FLASH
40 REM B=BRIGHT
50 INPUT "INK?";I: IF I>7 THEN
GOTO 50
60 INPUT "PAPER?";P: IF P>7 THEN
GOTO 60
70 INPUT "FLASH?";F: IF F>1 THEN
GOTO 70
80 INPUT "BRIGHT?";B: IF B> 1
THEN GOTO 80
90 LET A =(B*128)+(F*64)+(P*8)+I
100 POKE 23693,A
110 PRINT "TESTING",
120 GOTO 50
```

As you can see, if you set up the 4 variables (B,F,P,& I) it is posible to change the colors that are to be used next by just one or two lines!(line 90 is the key!) Well, HAVE FUN! Let me know if this has helped you any. I would also like to see some one write an article of this type to help us with other little known things such as this.

The "COMPUTER WIDOW" will return next month!

I got this from George Mockridge. Many of these we have seen before but I thought it would be nice to have them all together!

LITTLE GOODIES FOR THE 2068

by George Mockridge EDITION 3

The following "little goodies" are a collection of tips, aids, utilities, etc. that should prove helpful in 2068 programming. Special thanks to John Kuhn of the SINC TIMES in Florida and Stuart Ree of the TIMELINEZ N/L in Northern Calif. for their help. If you have a "little goodie" to share, please send it along and we will add it to the next edition. THANKS

TIMELINEZ
P.O. BOX 1312
PACIFICA, CA 94044

```
******* POKE 23609,x ***********
FOR KEYBOARD CLICK (x= 1 to 255)

******* POKE 23692,2 ***********
USE BEFORE EVERY PRINT FOR AUTO-
MATIC SCROLLING. WORKS LIKE THE
SCROLL COMMAND ON THE 1000/1500.

******* POKE 23692,1 ***********
ANOTHER WAY TO CONTROL SCROLL.
SCROLLS 22 LINES, THEN A KEY
MUST BE PRESSED FOR EVERY LINE.

****** POKE 23658,8 ************
PUT 2068 IN CAPS MODE.

****** POKE 23658,0 ************
TAKE 2068 OUT OF CAPS MODE.

********* PAUSE 0 **************
PAUSE UNTIL ANY KEY PRESSED.

********* PRINT ''' ************
GIVES LINE FEED TO PRINT
STATEMENT.

******* RANDOMIZE USR 0 ********
USE TO RESET COMPUTER.

*** POKE 23561,# (#=1 TO 35) ***
TIME THAT A KEY MUST BE HELD
DOWN BEFORE IT REPEATS. PREFER
10-15 FOR TEXT.

*** POKE 23562,# (#=1 TO 5) ****
DELAY BETWEEN SUCCESSIVE REPEATS
OF A KEY HELD DOWN. 3 FOR TEXT.

******* USR 15002 **************
TRY THIS TO GET OUT OF AN
INFINITE INPUT LOOP W/O CRASHING

***   DIM A$(704)              ****
***   PRINT AT 0,0; OVER 1;
      PAPER 1; INK 6; A$       ****
ALLOWS YOU TO CHANGE PAPER AND
INK COLOR W/O CLEARING SCRREEN.

***** PRINT #1; AT 0,2; "HI" ***
***** PRINT #1; AT 1,5; "BY" ***
***** PAUSE 0                 ***
PRINTS ON LINES 22 AND 23.

******* LOAD ""CODE      ********
******* RAND USR 33792   ********
FOR PROGRAMS THAT WILL NOT LOAD.

** LET x=INT(x*10^y+.5)/10^y ***
USE FOR ROUNDING. x=NO. TO BE
ROUNDED. y=NO. OF DEC. PLACES.

* 1 DEF FN r(x,y)=INT (x*10^y+.
    5)/10^y                   *
* 2 INPUT "Enter a number ";a  *
* 3 INPUT "Round off to? ";b   *
* 5 PRINT FN r(a,b)           *
SETS THE DEFINED FUNCTION TO THE
FORMULA USED TO ROUND OFF. a=
NO. BEFORE ROUNDING. b=NO. OF
DEC. PLACES DESIRED AFTER
ROUNDING.

******* PRINT AT ;; ************
"" ON SCREEN WHEN WAITING FOR
INPUT. NOTE: CAN'T USE STOP I
THIS METHOD, BUT CAP SHIFT 6
WILL STOP. BUG IN SYSTEM.

*PRINT PEEK 23635+256*PEEK 2
USE TO FIND STARTING ADDRESS.

** INPUT AT 22,0;AT 10,0;"inpu
   value";a$                  *****
INPUT AT ANY POSITION ON SCREE

**** 1 FOR I=0 TO 21
**** 2 FOR X=0 TO 31
**** 3 LPRINT SCREEN$ (I,X);
**** 4 NEXT X
**** 5 NEXT I
COPY SCREEN TO PRINTER WITHOUT
USING COPY COMMAND.

******* OPEN #2,"p" **********
SENDS ALL DATA NORMALLY DESTIN
FOR THE SCREEN TO THE PRINTER.

******* CLOSE #2 *************
CANCELS ABOVE COMMAND.

* 1 LET C=2                   *
* 2 FOR I=32 TO 255           *
* 3 PRINT AT 0,0;""           *
* 4 PRINT AT 0,0;CHR$ I       *
* 5 IF CODE SCREEN$ (0,0)=0 TH
    PRINT AT 4,C;CHR$ I: LET C
    C+2                       *
* 6 NEXT I                    *
LISTS CHARACTERS NOT RECOGNIZE
BY THE SCREEN$ COMMAND.

******** CLEAR 63255 *********
DO THIS FIRST IF YOU PLAN TO U
UDG's IN A LONG BASIC PROGRAM
THAT WILL INCORPORATE A VIDEO
MODE CHANGE. A BUG IN THE SYST
WILL ALLOW A LONG BASIC PROGRA
TO OVERWRITE YOUR UDG's IF
RAMTOP IS NOT FIRST LOWERED.

******** POKE 23750,0 ********
IF YOU ARE USING CARTRIDGE S/W
THAT CAN BE STOPPED BY THE BRE
KEY, THIS WILL ALLOW YOU TO
ENTER YOUR OWN BASIC LINES INT
RAM. TO RETURN TO THE CARTRIDG
ROMWARE, POKE 23750,128.

******** POKE 23693,56 *******
TO GIVE STARTING PAPER/INK COL

**** BASIC STARTS AT 26710 ***

******** CAPS SHIFT 3 ********
SCROLL TWO SCREENS WHEN LISTIN

******** POKE 26711,0 ********
GIVES LINE NO. 0. POKE 26711,1
TO CHANGE LINE 0 TO 1.

******** POKE 23659,0 ********
TO USE ALL 24 LINES (make
program unstopable), POKE 2365
2 resets. (Use with "INKEY$"
only, INPUT resets.)

******** POKE 26710,255 ******
USE TO MAKE LINES DISAPPEAR
(Makes line No. over 9999).
POKE 26710,0 WILL RESET.

******** INK OR PAPER 9 ******
GIVES CONTRASTING BASE COLOR.

***** 'E' MODE/CAPS SHIFT ****
*****  AND A COLOR 1 - 7  ****
GIVES INK COLOR IN LISTING.

***** 'E' MODE/UNSHIFTED  ****
*****  AND A COLOR 1 - 7  ****
GIVES PAPER COLOR (go back to
original color at the end of t
line, if not, all the lines wi
be the same color.)

** 1 INPUT "COMMENT";A$;CHR$ 1
     "COMMENT";B$             *
** 2 PRINT "COMMENT";A$;CHR$ 1
     "COMMENT";B$             *
EXAMPLE OF DOUBLE INPUTS.

** 9000 FOR I=1 TO 200
** 9010 BORDER 1:BORDER 2:
   BORDER 3:BORDER 4:BORDER 5:
   BORDER 6:BORDER 0:PAUSE 1
** 9020 NEXT I:RETURN
GOSUB 9000 FOR A STRIPED BORDE

******** POKE 23617,236 ******
USE TO GET A QUESTION MARK
CURSOR IN INPUT STATEMENTS.

** PRINT #0;"COMMENT":PAUSE 0
USE TO PRINT ON LINE 24.
```

BOOK REVIEW

30 MUSIC PROGRAMS FOR TIMEX SINCLAIR 2068

BY OLEG D. JEFIMENKO
WEST VIRGINIA UNIVERSITY

PUBLISHER: ELECTRET SCIENTIFIC COMPANY, P.O. BOX 4132, STAR CITY, WV 26505

AVAILABLE: E. ARTHUR BROWN CO., 3404 PAWNEE DR., ALEXANDRIA, MN,56308. $9.95 + SHP. & HNDL.

BY NOW YOU HAVE LOADED UP "MUSICOLA", INVESTIGATED ITS NICETIES, AND FOUND OUT YOU'RE NOT A COMPOSER. AND, PERHAPS, LIKE ME, YOU HAVE COPIED SEVERAL LISTINGS FOR COMPUTER PIANO OR ORGAN ONLY TO FIND THAT QWERTY KEYBOARD DIDN'T GIVE THE VISUAL CUES NECESSARY FOR YOUR LIMITED TUNE-TICKLING TALENTS. YEP, THOSE GROUPINGS OF BLACKS AND IVORIES SHOW THEMSELVES AS CRITICAL CUES INSTANTLY WHEN YOU ARE FACING A "PIANO" WITH THE HALF TONES SITTING IN THE WRONG PLACES. SO, ARE YOU TO HAVE A MUTE 2068? SOLUTION AT HAND.

JEFIMENKO'S BOOK HAS 30 FINE, MAINLY FAMILIAR, TUNES FROM FOLK TO LIGHT CLASSICS. HE'S CLEVERLY PROGRAMMED SO THAT YOU CAN HAVE ANY ONE SEPARATELY OR COMBINED INTO THREE "MUSIC BOXES"--COLLECTIONS WITH MENU SELECTION. SO THAT'S IT? BY NO MEANS.

THE OBVIOUS ADVANTAGE OF COMPUTER OVER CASCIO IS THE MEMORY, BUT WHAT ABOUT SNATCHES OF TUNES AS BACKGROUND TO YOUR OWN PROGRAMS? POSSIBLE THE WAY JEFIMENKO HAS WRITTEN THESE, BUT COMPUTER ITERATIONS MAKE WHAT WAS WITTY THE 1ST ROUND ANNOYING ON THE 3RD AND A DRAG ON GAME SPEED. SPRINKLE VERY LIGHTLY INTO YOUR HOMEMADE PROGRAMS.

THE 3 MUSIC BOXES MAKE NICE DEMO PROGRAMS FOR THE 2068 AND I LIKE TO SHOW OFF MY COMPUTER SO PEOPLE WON'T THINK I'M SUFFERING DEPRIVATION WITH NO APPLE IIC DESIGNER PIECE ON MY VANITY TABLE. WHAT WAS IT THAT SOLD ALL THOSE "VU-3D" COPIES?

THE AUTHOR IS OBVIOUSLY A MUSIC PROF AS WELL AS A SKILLED PROGRAMMER. HE'S INCLUDED THE CAPABILITY OF SELECTING DIFFERENT PITCHES AND PACES FOR EACH TUNE FOR EAR TRAINING. THERE'S GUITAR ACCOMPANIMENT PRACTICE, MOVEMENT FROM A SINGLE-VOICED BEEP TO MULTI-VOICED SOUND IN LATER PROGRAMS, AND WELL-EXPLAINED PROGRAMMING TECHNIQUE. I LEARNED SOMETHING ABOUT SYSTEMATIC HANDLING OF READ-DATA PROGRAMS SO THAT PROGRAMS COULD BE WELL-MESHED WITHOUT MERGING. THIS GUY IS ORGANIZED!

A TYPO-FREE PUBLICATION...IF THE TUNE SOUNDS WRONG, CHECK YOUR DATA STATEMENTS. THE CONFIDENCE THAT THE PROOFREADER KNEW HIS JOB IS WORTH PLENTY TO ME AFTER ALL THE MAGAZINE LISTINGS (SLICKS) I HAVE COMBED AND CURSED. TYPOS ARE SO PREVALENT EVEN IN TRADE BOOKS THAT I AM ASTOUNDED BY THIS UNBLEMISHED PRODUCT FROM AN OBVIOUSLY TINY PUBLISHER. HAVE YOU EVEN HEARD OF STAR CITY, WV? THE BOOK HAS A PLASTIC SPIRAL SPINE AND A SPUNKY LOOK.

WHICH BRINGS ME TO THE MARVELOUS ECCENTRICITY OF AUTHORS, PROGRAMMERS, HARDWARE DEVELOPERS AND SUCH WHO CONTINUE TO PRODUCE FOR A COMPUTER ABANDONED BY TIMEX NEARLY A YEAR AND A HALF AGO. THE TIME SPAN IS IMPORTANT BECAUSE THESE PEOPLE HAVE KEPT TS2068 FROM BECOMING A CURIO AS OF 8:00am,FEBRUARY 20, 1984. THE PUBLICATION DATE FOR THIS BOOK IS 1984--WITHOUT A DOUBT DURING

THE 10 DAYS, 10 MONTHS AFTER TIMEX ANNOUNCEMENT. IF A BOOK OF THIS QUALITY HAD COME OUT FOR A BEST-SELLING HOME COMPUTER, ONE WITH A FAT ADVERTISING BUDGET, THERE'D HAVE BEEN A FANFARE BY SLICKS' REVIEWERS.

I HAVE WRITTEN THIS PUBLISHER A FAN LETTER. SYMBIOSIS IS WHAT WE HAVE GOING HERE. WE TS USERS HAVE A VESTED INTEREST IN THE NEWSLETTERS, AUTHORS, PUBLISHERS AND DEVELOPERS. IS IT WORTHWHILE? READ FAMILY COMPUTING, AUGUST '85 EDITION; MUSIC MIT MICROS IS FEATURED. IBM PC JR HAS 3 VOICES; APPLE II SERIES AND TRS-80 III AND 4 HAVE NO TRUE BUILT-IN SOUND CAPABILITIES WHATEVER; COMMODORE 64 (CONSIDERED A MUSICAL CHAMP) HAS 3 VOICES AND 8 OCTAVES. THE TS 2068 HAS 4 VOICES AND ALMOST 11 OCTAVES. THE TS 2068 WAS AND IS AN ADVANCED 8-BIT COMPUTER.

ONE NEED FOR ENJOYMENT OF YOUR MUSIC BOXES IS AN AMPLIFIER FROM RADIO SHACK AND A FEW WORDS FROM JAMES (GREG) DUPUY, "RAMTOP" EDITOR, ON CABLE CONNECTIONS. I'VE BEEN ENJOYING MY DUPUY CONNECTIONS FOR A GOOD WHILE NOW.

JOAN KEALY

THANKS Joan!
I know I found your article ver interesting! I know many mon will too! Joan an I know eac other from CJM magazine. I hop to see more of your articles!

One of our new members, Al Gedreis, gave me a copy of this program. If you want to have any of these extra 3 type styles, then you can add this short program! I have given you two listings. The first is as I got it. The second is a revision that I made. It is shorter and takes only 9 lines. On the second version, in line 9995 you may leave off the INPUT statement and have the GOTO any line you want in your own program so that you can add or MERGE this into any BASIC program. You must be careful if you use this with any program using machine code as it pokes 79 addresses of its own. As you can see from the examples, this makes the printing on the 2040 very nice BUT! What you see here is also on the SCREEN! So you can intermix the different types any way you want!!! Have Fun!

James G. DuPuy

```
8999 STOP
9323 POKE 23607,60: RETURN
9324 LET typ=2: POKE 23618,110:
POKE 23619,36: POKE 23620,2
9325 LET typ=1: POKE 23618,110:
POKE 23619,36: POKE 23620,2
9326 LET typ=0: RANDOMIZE USR (t
org+256+2-typ): POKE 23607,torg-
4: RETURN
9980 POKE 23562,1: LET torg=255:
 CLEAR (256+torg-769): LET torg=
255: LET reg=9323: LET bld=9324:
 LET mod=9325: LET ital=9326: LE
T REG=9323: LET BLD=9324: LET MO
D=9325: LET ITAL=9326
9981 FOR i=0 TO 79: READ k: POKE
 (i+256+torg),k: NEXT i
9982 DATA 0,0,121,203,39,203,39,
50,21,255,33,0,61,17,0,torg-3
9983 DATA 1,0,3,126,24,48,203,63
,24,44,230,112,24,37,121,230,7,2
03,39,50,40,255,126,24,30,24,28,
24,16,24,14,24,14,24,20,24,18,24
,2,200,63,203,63,24,10,203,39,20
3,39,24,4,183,203,39,182,18,35,1
9,11,120,177,32,196,201
9984 RESTORE 9982: BORDER 6: PAP
ER 6: INK 9: CLS : POKE 23607,60
9985 PRINT AT 0,1;"SETYPE offers
 you a choise of";TAB 8;"four ty
pe styles"''TAB 12;"Regular"''
9986 GO SUB bld
9987 PRINT TAB 12;"Bold"''
9988 GO SUB mod
9989 PRINT TAB 12;"Modern"''
9990 GO SUB ital
9991 PRINT TAB 12;"Italics"''
9992 GO SUB reg
9993 PRINT TAB 4;"To choose your
 type style";TAB 4;"after leavin
g this screen"'';TAB 6;"Press GO
SUB REG";TAB 9;"or GOSUB BLD";TA
B 9;"or GOSUB MOD";TAB 9;"or GOS
UB ITAL"''TAB 2;"Press C to copy
 this screen"''TAB 2;"Press any
other key to exit"
9994 IF INKEY$="" THEN GO TO 999
4
9995 IF INKEY$="C" OR INKEY$="c"
 THEN COPY
9996 CLS : PAUSE 30
9997 PRINT AT 0,0;"SAVE TO TAPE"
; FLASH 1;"?": IF INKEY$="" THEN
 GO TO 9997
9998 IF INKEY$="Y" OR INKEY$="y"
 THEN SAVE "SETYPE" LINE 9980
9999 CLS
```

```
9989 STOP
9990 POKE 23607,60: RETURN
9991 LET typ=2: POKE 23618,9: PO
KE 23619,39: POKE 23620,2
9992 LET typ=1: POKE 23618,9: PO
KE 23619,39: POKE 23620,2
9993 LET typ=0: RANDOMIZE USR (t
org+256+2-typ): POKE 23607,torg-
4: RETURN
9994 LET TYPE=9994: LET torg=255
: CLEAR (256+torg-769): LET torg
=255: LET reg=9990: LET bld=9991
: LET mod=9992: LET ital=9993: L
ET REG=9990: LET BLD=9991: LET M
OD=9992: LET ITAL=9993
9995 FOR i=0 TO 79: READ k: POKE
 (i+256+torg),k: NEXT i: INPUT "
Enter TYPE that you want:
REG/MOD/BLD/ITAL :";z: GO SUB z:
 GO TO 9980
9996 DATA 0,0,121,203,39,203,39,
50,21,255,33,0,61,17,0,torg-3
9997 DATA 1,0,3,126,24,48,203,63
,24,44,230,112,24,37,121,230,7,2
03,39,50,40,255,126,24,30,24,28,
24,16,24,14,24,14,24,20,24,18,24
,2,200,63,203,63,24,10,203,39,20
3,39,24,4,183,203,39,182,18,35,1
9,11,120,177,32,196,201
```

ABCDEFGHIJKLMNOPQRSTUVWXYZ.,#?=+
ABCDEFGHIJKLMNOPQRSTUVWXYZ.,#?=+
ABCDEFGHIJKLMNOPQRSTUVWXYZ.,#?=+
ABCDEFGHIJKLMNOPQRSTUVWXYZ.,#?=+

Tom Jennens sent this to me. It was given to him by BOB GOVAN. THANKS Bob! If you got the "MONITOR" program from Tom or out of the book: Inside the T/S 2000 by J. Naylor & D. Rogers, then add this to it.

Addition to
MONITOR

From INSIDE THE TIMEX SINCLAIR 2000 COMPUTER by J. Naylor & D. Rogers ppg.50-55

TO ADD AUTOMATIC BLOCK LENGTH
By Bob Govan

Add to line 3020,"LET P=N"

```
3020>LET a$=z$: GO SUB 200: LET
l=n: LET a=n: GO SUB 50: PRINT A
T 6,4;z$;"=";a$: LET P=N
THEN,CHANGE A$ FROM"LENGTH OF BL
OCK"TO "END ADDRESS"
3030>LET a$="LENGTH OF BLOCK": G
O SUB 200: LET s=n: LET a=n: GO
SUB 50: PRINT AT 8,2;"Length of
block=" ;a$
3030>LET a$="END ADDRESS": GO SU
B 200: LET s=n: LET a=n: GO SUB
50: PRINT AT 8,2;"Length of bloc
k=" ;a$
```

Then change"s=n" to"s=n-P" and " a=n" to"a=n-P"

```
3030>LET a$="END ADDRESS": GO SU
B 200: LET s=n-P: LET a=n-P: GO
SUB 50: PRINT AT 8,2;"Length of
block=" ;a$
```

AUTOMATIC START UP IN HEXADECIMAL MODE

ADD THESE TWO LINES

```
9050>GO SUB 5000
9300>SAVE "MONITOR" LINE 0
```

Hello to **ALL!** I hope your month has gone well! Mine has been rather trying! I still don't have my car back and it looks like I won't get it until late this month! Last week I sent out quite a few letters to many of the companies that are currently advertising in such magazines as 8UM, TS Horizons, I.I.S.J. and more. I am hoping that they will be interested in placing their ads in our newsletter also! I feel that our rates are very reasonable.($25-page, $15-1/2 page, $10-1/4, $7-1/8 or less) I have also been trying to contact any members that are on our records but are not receiving the **RAMTOP**. Let me tell you, that's no easy thing! Our records show that we have close to 200 members but some have bought bigger and I guess they think better computers (We know better!). So in actuality we are in the area of 150. Not all of these are active.(receiving the newsletter) I sure hope that if you have any friends with Timex or Sinclair computers that you bring (or drag) them to a meeting! Our family of users is still in great numbers and for our own good, we better keep it that way! In the past few months we have grown quite a bit too! We are mailing to over 10 different user groups and to over 16 different states! As I told you last month, we were in Cranes Cleveland Business Magazine! Since then we are still growing! It was brought up at the July West side meeting that Dick Seig would like us to form a board of Directors. I feel this is a good idea. I myself would like to be on the board. Andy Kosionek also has volunteered. I feel that we should have at least 1 more on the West side and 2 on the East side. If you are interested, call Dick Seig. We will discuss this more at the next meeting.

Last month I got a couple of cards from Joan Kealy. She is one of our out of state members.(Texas) She sent me a <u>WANT AD</u> for the following: 1- She has the Tasman SERIAL interface and a Gorilla Banana SERIAL printer. She is having a problem trying to get Tasword II and Tasprint to work. If any of you can give her ANY advise either send her a letter to: Joan Kealy, 1750 Lee Travino #2B, El Paso, Texas, 79936 or give me a call and I will pass it on myself. 2- She has also asked a good question. That is: "How do you use the function of VAL$ and what is it good for?" I have had 2 answers so far. Max Schoenfeld wrote to me and said that he didn't have a good answer but he did find that in the book "The Complete Spectrum", on page 78, was this: The last group consists of the instruction VAL$, which no one appears to have found a use for up to date. Paul Banisik had this to say: "VAL$ does the same thing that VAL does except that the string variable must be enclosed in quotes and it is not evaluated; rather, it is printed out. VAL$ has no mathematical use." Well, Joan, I hope this is of some help to you. I would also suggest that you write to Tasman in England about your interface problem. If you need the address, I will try to get it for you. *Till next month, TAKE CARE!!! James G. DuPuy*

Joan is offering $ 25.00 Reward to the First person who can solve Her problem with

1000/1500/2x of people. Here are three programs just for you! I am giving them to yo just as I got them. I wish the creator of these would let me know so I can give him/her recognition!!! In the future, please put your name in the line listing or at least somewhere on the same sheet so we know who you are!(unless you don't want to) THANKS! Whoever you are!

```
        HI JIM!!.
THE ENCLOSED IS TWO SMALL PROGRA
MS,THAT MAY BE OF INTEREST TO SO
ME. IF YOU CARE TO USE THEM-IN R
AMTOP??.
THE CLOCK- WILL RUN ON THE 1000'
& 1500.!
I HAVEN'T FIGURED OUT HOW TO RUN
 ON 2068. IF YOU DO ??
PLEASE LET ME KNOW,O'K??
THE TYPESET IS A SHORT MEMO-TYPE
- WORD PROCCESSOR,ABOUT 22-LINES
 MAYBE YOU CAN EXPAND ON
THE THIRD,DOES PRINT OUT LARGE C
HR$ 'S.
HOPE YOU CAN USE???.     BY THE W
AY,I HAVE TRIED TO USE TASPRINT,
AND COULD'T GET IT TO LOAD!! ON
2068. SO-I'D LIKE FROM YOU INFOR
MATION OR COPY OF THE "ITALATIC"
PRINTING YOU USE IN RAMTOP
```

```
    2 FOR L=1 TO 22
    5 PRINT "▚▚▚▚ CLOCK ▚▚▚▚
▚"
    7 NEXT L
    8 PAUSE 100
    9 CLS
   10 REM "DIGTIAL CLOCK"
   15 PRINT "INPUT TIME"
   20 INPUT TIME
   25 CLS
   30 LET M=INT (TIME/100)*60+TIM
E-INT (TIME/100)*100
   35 GO TO 140
   40 LET T=0
   50 LET D=INT ((INT (M/60))/10)
   60 LET T=7
   65 LET D=(INT (M/60))-10*D
   70 GO SUB 500
   75 PLOT 31,20
   80 PLOT 31,27
   85 LET T=16
   90 LET D=INT (60*(M/60-INT (M/
60))/10+.05)
   95 GO SUB 500
  100 LET T=23
  110 LET D=M-INT (M/10)*10
  120 GO SUB 500
  130 IF PEEK 16437<>245 THEN GO
TO 130
  140 PAUSE 1248
  150 LET M=M+1
  160 IF M=1440 THEN LET M=0
  170 GO TO 40
  500 LET N=7905+D*8
  505 PRINT AT 7,T;
  510 FOR N=N TO N+5
  515 LET X=PEEK N
  520 FOR L=1 TO 7
  525 LET C=0
  530 IF X<128 THEN GO TO 560
  540 LET C=128
  550 LET X=X-128
  560 LET X=X*2
  570 PRINT CHR$ C;
  580 NEXT L
  585 PRINT TAB T;
  590 NEXT N
  600 RETURN
  700 SAVE "CLOCK"
  710 RUN
```

```
    1 REM "BASIC"
    2 SLOW
    5 REM TYPESET PRINTOUT
   10 PRINT "TYPESET...ENTER TEXT
;"
   15 FAST
   20 INPUT A$
   25 CLS
   30 PRINT A$
   40 PRINT AT 20,0;"ENTER:END1 T
O LPRINT ,2 TO SAVE     3 TO LOA
D, 9 TO START AGAIN."
   45 SLOW
   50 IF INKEY$="" THEN GOTO 50
   60 IF INKEY$="1" THEN GOTO 100
   70 IF INKEY$="2" THEN GOTO 200
   80 IF INKEY$="3" THEN LOAD ""
   90 IF INKEY$="9" THEN GOTO 300
   95 GOTO 50
  100 LPRINT A$
  110 GOTO 25
  200 FAST
  210 CLS
  220 PRINT AT 20,0;"SET RECORD
THEN PRESS ENTER"
  230 PAUSE 4E4
  240 SAVE "TYPESE▦"
  250 GOTO 25
  300 CLS
  310 RUN
```

```
   10 FOR A=7680 TO 7992 STEP 8
   15 FOR C=0 TO 7
   20 LET D=PEEK (A+C)
   30 PRINT A+C;"    ";D
   40 FOR B=31 TO 24 STEP -1
   50 PRINT ;C,B-12;D-2*INT (D/2)
   60 PRINT AT C,B;CHR$ ((D-2*INT
(D/2))*128)
   70 LET D=INT (D/2)
   80 NEXT B
   90 NEXT C
  100 PAUSE 100
  110 POKE 16437,255
  120 CLS
  130 NEXT A
  140 PRINT
  160 PRINT "JIM-THIS WILL RUNON
THE 1000&1500-HERE AGAIN ONTHE 2
068-I DON'T KNOW HOW TO MAKE THE
 THING PRINT OUT CHR$ ON 2068-WH
AT WOULD I POKE-IN LINE 110-TO M
AKE IT?????. "
```

Here are three fine programs from someor who CARES! As you well know, WE NEED YOU ARTICLES! So, PLEASE, PLEASE!!! SEN YOUR ARTICLES TO ME! My address is

James G. DuPuy
6514 Bradley Ave.(DOWN)
Parma, OH 44129
Phone: 661-4105

Here is a program for the 2068. It uses the SOUND command. If you have MCI, SPRINT or any of the long distance services, you know that you have to dial the local access number then with TOUCH TONE you must dial your access code, area code and finally the phone number. This program will dial in true TONES! It also has a 20 number memory and REDIAL!(nice when you get a busy signal!) I'm sure that it will work on the bank sevices too! To get the # and * just hold down the SS and push the 3 or B keys. To use you must have the mic of the phone right at the 2068 speaker.

```
   5 DIM a$(20,30): DIM b$(20,10
)
  10 REM [illegible]
  11 BORDER 6
  12 CLS : PRINT FLASH 1;"
T O N E   D I A L E R     "
  14 PRINT ''"0 - 9,#,* TO DIAL
MANUALY"'"R --- TO REDIAL LAST N
UMBER"'"S --- TO STORE A NUMBER"
'"M --- TO DIAL FROM MEMORY"'"C
--- TO CLEAR REDIAL"'"S AND CAP
SHIFT TO SAVE TO TAPE"'"  WITH T
HE NUMBERS IN THE MEMORY"'''
  15 LET r$=""
  16 POKE 23609,10
  20 LET n$=INKEY$: IF n$="" THE
N GO TO 20
  22 IF n$="m" THEN GO TO 2000
  24 IF n$="s" THEN GO TO 3000
  26 IF n$="r" THEN GO TO 4000
  27 IF n$="c" THEN GO TO 12
  28 IF N$="S" THEN GO TO 5000
  29 IF n$="*" OR n$="#" THEN GO
 TO 32
  30 IF n$>"9" OR n$<"0" THEN GO
 TO 20
  32 PRINT n$;"-";
  35 LET r$=r$+n$
  36 IF n$="#" THEN GO TO 1010
  37 IF n$="*" THEN GO TO 1011
  38 IF n$="p" THEN PAUSE 0
  40 GO TO VAL n$+1000
 100 SOUND 0,l;1,0;2,h;3,0;7,60;
8,15;9,15
 105 IF n$="r" OR n$="m" THEN PR
INT r$(i);"-";
 110 IF INKEY$<>"" THEN GO TO 11
0
 120 PAUSE 5
 130 SOUND 8,0;9,0;7,63
 134 IF n$="r" OR n$="m" THEN RE
TURN
 140 GO TO 20
1000 LET l=117: LET h=82: GO TO
100
1001 LET l=158: LET h=91: GO TO
100
1002 LET l=158: LET h=82: GO TO
100
1003 LET l=158: LET h=75: GO TO
100
1004 LET l=143: LET h=91: GO TO
100
1005 LET l=143: LET h=82: GO TO
100
1006 LET l=143: LET h=75: GO TO
100
1007 LET l=129: LET h=91: GO TO
100
1008 LET l=129: LET h=82: GO TO
100
1009 LET l=129: LET h=75: GO TO
100
1010 LET l=117: LET h=75: GO TO
100
1011 LET l=117: LET h=91: GO TO
100
2000 REM [illegible]
2005 GO SUB 2010: GO TO 2100
2010 CLS : PRINT FLASH 1;"     M
 E M O R Y   L I S T
"
2015 LET v=0
2020 FOR j=1 TO 20
2030 PRINT AT j,0;j;"- ";b$(j);"
 - ";a$(j)
2035 IF a$(j)="                " THEN
 LET v=v+1
2040 NEXT J
2050 RETURN
2100 IF v=20 THEN PRINT "NO NUMB
ERS STORED YET.": PAUSE 120: GO
TO 12
2110 INPUT "WHICH # TO DIAL? ";
Q: IF Q>20 OR Q<1 THEN GO TO 211
0
2120 IF A$(Q)="                " THEN
 PRINT "NO # AT ";Q: PAUSE 100:
GO TO 12
2130 PRINT B$(Q);" - ";
2140 LET R$=A$(Q)
2150 GO TO 4005
3000 REM [illegible]
3010 GO SUB 2010
3020 INPUT "WHICH # TO STORE? ";
Q: IF Q>20 OR Q<1 THEN GO TO 302
0
3030 PRINT Q;
3040 INPUT "NAME? :"; LINE B$(Q)
: IF b$(q)="                " THEN GO
TO 3040
3045 PRINT " - ";B$(Q);" - ";
3050 INPUT "PHONE #? :"; LINE Z$
: IF LEN Z$>30 OR LEN z$<1 THEN
GO TO 3050
3055 LET A$(Q)=Z$
3060 PRINT A$(Q)
3070 INPUT "C-CORRECT, ENT-CONT.
";X$: IF X$="c" THEN GO TO 3030
3075 GO SUB 2010: INPUT "[illegible]-MEN
U, S- TO STORE A #  :";x$: IF x$
="s" THEN GO TO 3020
3080 GO TO 12
4000 REM [illegible]
4002 IF INKEY$<>"" THEN GO TO 40
02
4003 PRINT "REDIAL ";
4005 FOR i=1 TO LEN r$
4008 IF r$(i)=" " THEN GO TO 402
0
4010 IF r$(i)="#" THEN GO SUB 10
10: GO TO 4020
4012 IF r$(i)="*" THEN GO SUB 10
11: GO TO 4020
4013 IF r$(i)="p" THEN PAUSE 0:
GO TO 4020
4015 GO SUB 1000+VAL r$(i)
4020 NEXT i
4025 PRINT
4030 GO TO 20
5000 REM [illegible]
5005 CLS : PRINT FLASH 1;"ENTER
PROGRAM NAME.              YOU CA
N ONLY ENTER UP TO 10      CHARAC
TERS."
5010 INPUT x$: IF LEN x$>10 OR L
EN x$<1 THEN GO TO 5010
5015 CLS : PRINT AT 10,12; FLASH
 1;"SAVING"
5020 SAVE x$ LINE 12
5030 GO TO 12
```

Next month we will have a Word Process program for the 1000/1500. It was set Roy D. Zelesnik. (Roy, are you by a chance the owner of Zelesnik's at t bottom of Jennings Rd.?) Next month will, as always, have lots of new reviews, programs, and LOTS more in YO RAMTOP!